



**Electrotherm Solar Ltd.**



The solar energy expert

Operation & Maintenance Manual for  
Evacuated Tube Collector  
&  
Flat Plate Collector Integrated System

Dear Consumer,

Congratulations on being a proud owner of a new eleCtra solar water heating system. You have made a smart consumer decision to show that you care in protecting our tomorrow. We know from experience that you will soon be showing your neighbors, relatives, friends and people around about convenience and savings by using hot water through eleCtra systems.

Should you experience any problems with our product, dealer, distributor or company executives, **please remember to call 1800 258 4040 or sms“eleCtra” <space> “call me” to 56767.**

Product registration is an important step. Registering helps us facilitate warranty service and permit us to contact you. **To register your product kindly fill the warranty card on the inside back cover of this manual (or ask for it from the eleCtra distributor/dealer) and send it to Customer Care address mentioned on the back cover.**Or ask the eleCtra distributor/ dealer to fill the warranty card on your behalf and ensure it is send to Customer Care. **Registration is required for warranty coverage.**

eleCtra is a product from Electrotherm Solar Ltd. which is mainly engaged in providing solar thermal solutions for domestic, commercial and industrial systems.

Electrotherm Solar Ltd. has a fully automated manufacturing facility at Vatva, Gujarat plant with high emphasis on quality and deliveries.

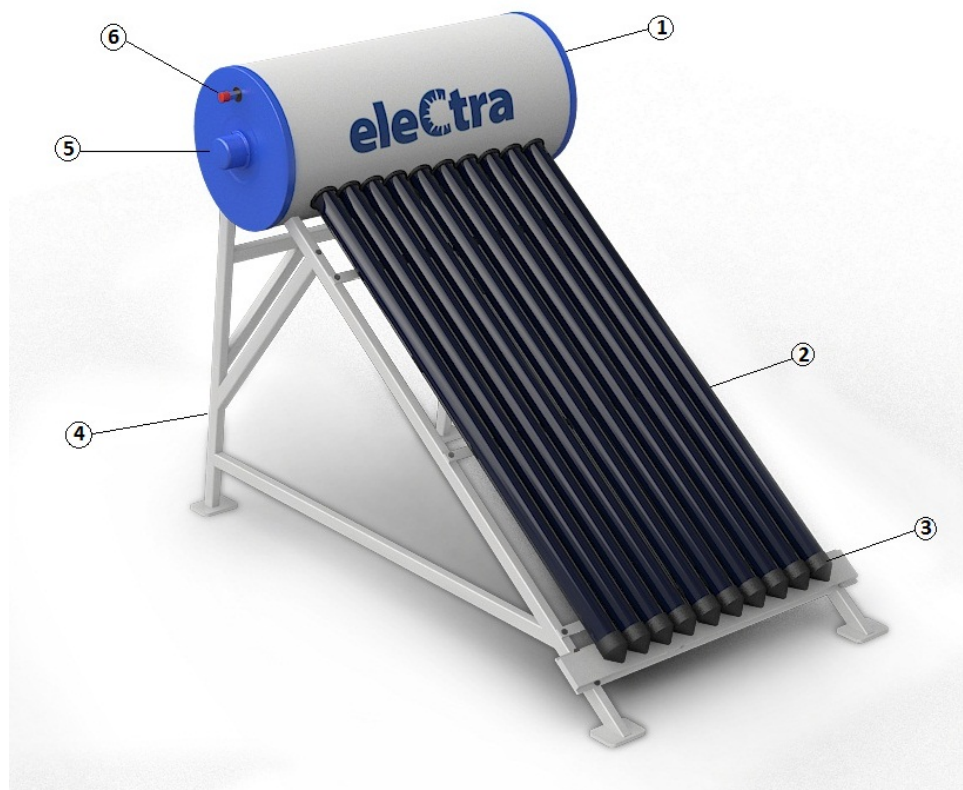
Electrotherm Solar Ltd. is a sister concern of Electrotherm (India) Ltd., an ISO 9001 certified, public limited business conglomerate with interest in Engineering, Steel, Ductile Iron Pipe, Electric Vehicle, Renewable Energy and Education.

Thank you once again for purchasing eleCtra. We are glad to be associated with you.

Regards,

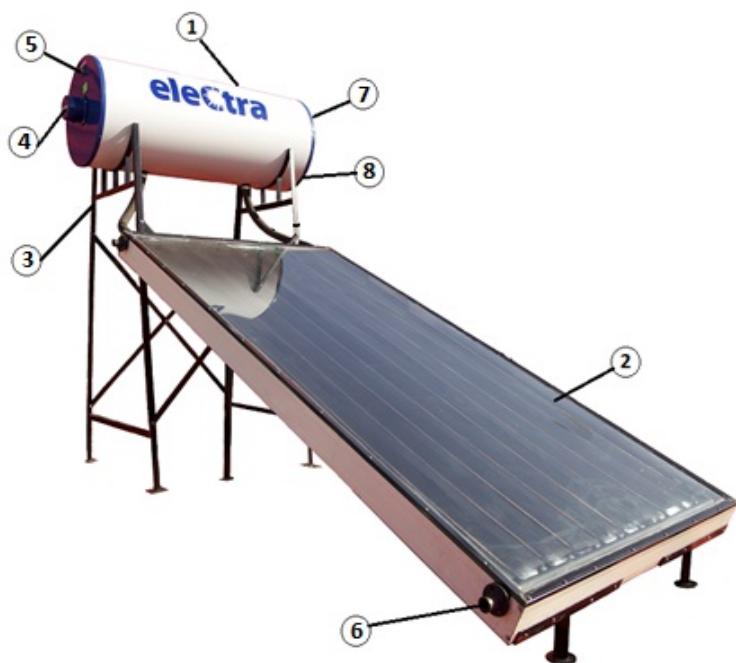
Electrotherm Solar Ltd.

# Evacuated Tube Collector



Sr.No.	Part List
1.	Insulated Hot water Storage Tank
2.	Evacuated Tube Collector
3.	End Caps
4.	Galvanized Iron structure
5.	Electric Back-up Heater
6.	Hot water outlet

## Flat Plate Collector (FPC)



Sr.No.	Part List
1.	Insulated Hot water Storage Tank
2.	Flat Plate collector
3.	Galvanized Iron structure
4.	Electric Back-up Heater
5.	Hot water outlet
6.	Brass Flanges
7.	Sacrificial Anode
8.	Cold water inlet

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## General Technical Specifications

# Evacuated Tube Collector

Sr. No.	Description	Specification			
1	System capacity in LPD	100	150	200	300
2	Number of tubes	10	15	20	28
3	Collector tube length	1800 mm			
4	Tube diameter	58 mm			
5	Tube material	Borosilicate 3.3 glass			
6	Selective coating	Three target three layer 1. Cu: Infrared reflection layer 2. SS-AlN: Bonding agent cum absorption layer 3. AlN: Absorption and antireflection layer			
7	Inner Tank Material	SS 304			
8	Outer tank cladding material	Pre coated GI			
9	Insulation Material	Poly-Urethane Foam (PUF)			
10	Reflector Material (Optional)	Stucco Aluminum			
11	Structure Material	Hot Dip Galvanized			
12	Outlet Water Temperature	60 - 70 °C**			
13	System Height	1700 mm			
14	Tank Diameter	460 mm			
15	Inlet Connections	3 / 4" BSP Male			
16	Outlet Connections	3 / 4" BSP Male			

17	Tank Length (mm)	100 LPD	150 LPD	200 LPD	300 LPD
		1000	1500	2000	3000
18	Area [(N-S) m X (E-W) m]	1.8 X 1.2	1.8 X 1.8	1.8 X 2.1	1.8 X 3.1
19	Sacrificial Anode Connection	3 / 4" BSP Male			
20	Electrical Heater Connections	1 1 / 4" BSP Female			
21	Net weight	100 LPD	150 LPD	200LPD	300 LPD
	Empty condition (kg)	56	75	110	165
	Working condition (kg)	178	258	372	560

\* Due to constant up gradation, product specifications are subject to change without prior notice. This table does not apply to the cases where systems are designed specifically.

\*\* At standard test conditions

# Flat Plate Collector (FPC)

Sr. No.	Description	Specification
1	System capacity in LPD	100 / 125 & its multiple
2	Collector	2 m X 1 m X 0.1 m (each)
3	Collector Type	Standard or 2 <sup>nd</sup> Collector / Non standard or 1 <sup>st</sup> Collector
4	Collector Glass	Toughened glass, 4mm thick
5	Absorber Coating	Selective coated 'NALSUN'
6	Absorber fin, Header & Riser Material	Copper
7	Aperture area	2 m <sup>2</sup> (each)
8	Inner Tank Material	Stainless steel 304
9	Outer tank cladding material	Pre coated GI / Aluminum
10	Insulation Material	Poly-Urethane Foam (PUF)
11	Structure Material	Powder Coated Steel
12	Outlet Water Temperature	55 - 65 °C**

\* Due to constant up gradation, product specifications are subject to change without prior notice. This table does not apply to the cases where systems are designed specifically.

\*\* At standard test conditions



## System Identification

We are maintaining a record of our each & every system to take proper care of our all system as well as customer through serial number of eleCtra system.

Example: Serial number of system is: **13B8450**

Identification:

13 – Year of manufacturing

B – Month of year (A=January, B=February, C=March.....)

8450 – Product number

System type & classification will also automatically link with serial number in our record.

## Component Details

### Storage tank

The storage tank is made of three layers tank, PUF (Poly-Urethane Foam) insulation and outer tank. **The inner tank material is corrosion resistant stainless steel material& undergoes special corrosion coating treatment for longer tank life.**High density PUF insulation thickness is 50 mm which helps preserve the temperature of water in extreme winter season also. Outer tank is made of pre-coated GI providing a fine surface finish and a long-lasting life along with superior aesthetics.

### Evacuated tubes

Each evacuated tube consists of two glass tubes made from strong borosilicate glass. The outer tube is transparent allowing light rays to pass through with minimum reflection as well as absorption.

The inner tube is coated with a **special three target three layer selective coating** which features excellent solar radiation absorption and minimum heat emission properties. The top of the two tubes are fused together and vacuum is created between two layers of glass, which is an important factor in the performance of evacuated tubes. The absorption efficiency of the tubes is more than 92%.

### Flat Plate Collector

BIS Approved Flat Plate Collector is consisting toughened glass, Aluminum box, Absorber fin, Header, Riser, Nipple for cold & hot water flanges etc. The all component has specific characteristic to perform.

### Structure

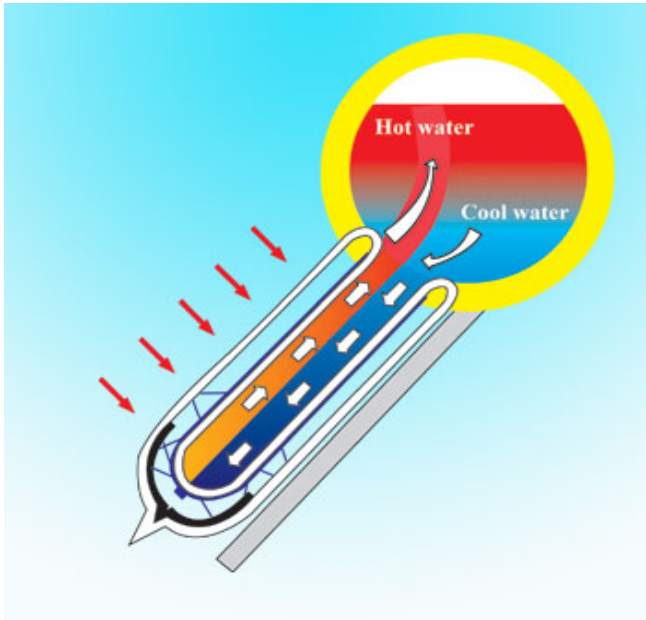
**Structural components are made of high quality steel with Galvanized Iron Coating for prolonged durability** It is made such a way to get benefit of easy assembly/disassembly with higher strength.

## System Operation

### Evacuated Tube Collector

#### How it works?

The eleCtra solar water heating system works on the principle known as **“Thermosiphon” (natural circulation by heat)**. Due to density difference between the cold & hot water, the lighter hot water flows up into the tank and the heavier cold water enters the collector.



Solar radiation incident on the collector tubes heats the absorber. This heat is transferred to the water contained in the tubes & becomes less dense than the water in the storage tank. Hot water starts rising and settles at the top of the storage tank. Simultaneously cold water descends to the collector absorber tubes, gets heated up and the cycle repeats.

The circulation in the system during the heating process is purely due to the difference of density only. There is no other mechanical moving part hence the system reliability is very high.

At the end of the day when radiation is zero (after sun set) the tubes will contain heavier cold water and the tank will have lighter hot water. This will ensure that there will be no circulation during night & hence no conduction losses on account of this.

The hot water storage tank is well insulated so the water stays hot and can be used later in the day or even the following day. Hence the hot water you are getting in the morning is majority the performance of eleCtra of the previous day.

The Sacrificial Anode protects the tank from galvanic corrosion. The system works well even in low sunlight days.

### Performance

On a bright sunny day, **eleCtra gives hot water up to 60 to 70 °C** (under standard test conditions). You may also observe steam coming out from vent pipe. This is very normal condition.

The **Evacuated tube collector in eleCtra performs well in overcast conditions due to diffused radiation collection ability**. You may get warm water instead of hot water in monsoon season. The temperature rise inside the vacuum tubes is independent of the ambience temperature.

The electric backup heater (if applicable) can be used when there is need of additional water for more persons or inadequate solar radiation to get even warm water in some of the cloudy monsoon days.

# Flat Plate Collector (FPC)

## How it works?

Solar water heating systems **works on thermo-siphon and black body absorption principle**. Initially cold water from the over head tank is filled in to the system by gravity flow. Solar collector coated with selective black chrome will absorb the sun rays converts into heat and this heat will be transferred to cold water inside the fin & tube. Since the hot water being less in weight it moves up to the top of the solar tank. At the same time cold water stored in the bottom of the solar tank will flows in to the solar collector bottom header and starts heating up. This is a cyclic process and continues from morning till evening as long as the Sun shines. In a good sunny days water temperature will be more than 60°C by evening. This stored hot water will be utilized through a well insulated hot water pipe lines for bathing, cooking, washing etc.

## Performance

On a bright sunny day, **eleCtra gives hot water up to 55 to 65 °C** (under standard test conditions). You may also observe steam coming out from vent pipe. This is very normal condition.

The electric backup heater (if applicable) can be used when there is need of additional water for more persons or inadequate solar radiation to get even warm water in some of the cloudy monsoon days.

## Installation & Commissioning

### System allocation

Select a suitable area on the terrace, which is free from shadow during any part of day. Locate the area on the terrace such that the path of external hot water piping is shortest.

### Installation

(Refer drawing: Piping/Plumbing Diagram)

1. Shift all the material to the location identified for installation of the system on terrace.

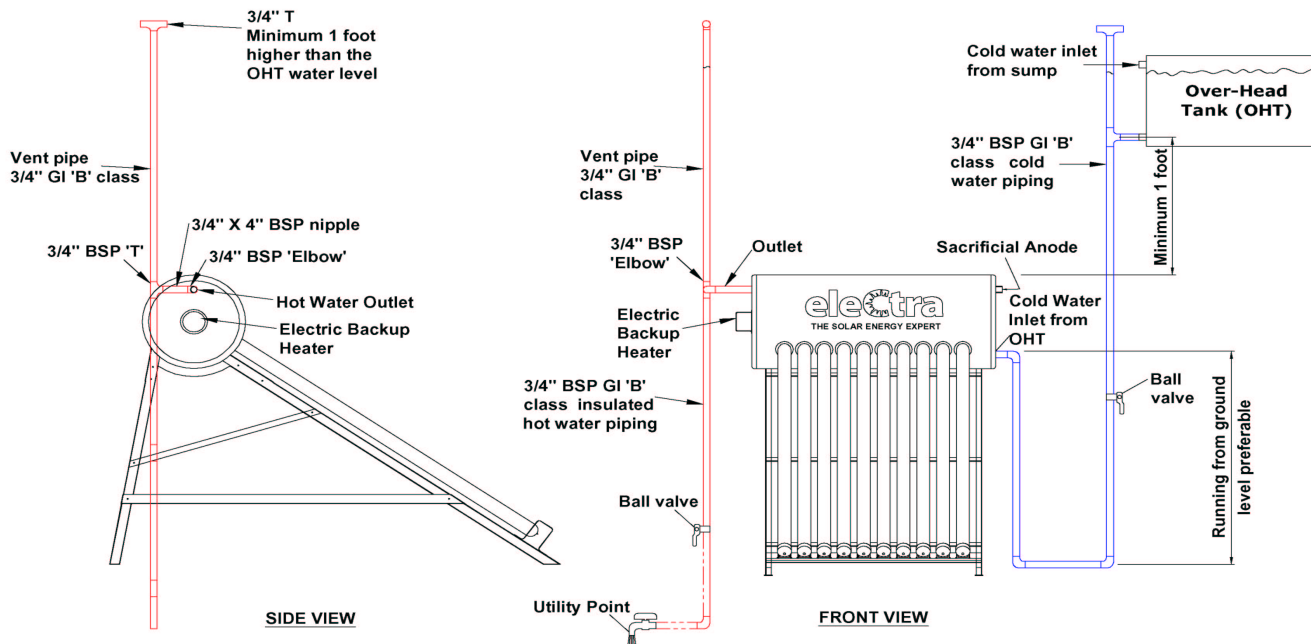
**Caution:** While shifting, carry the glass tube box / container carefully to avoid damage to the glass

2. In the identified area make the structure assembly and place it such a way that the inclined surface is facing to south.
3. For direction identification take help of compass and ensure that while using it, no any magnetic or ferrous based material should be near to it. Terrace floor contains ferrous material in RCC which leads to wrong results of compass pointer. Put the compass at the safe distance from any such material while identifying direction.
4. Two type of installation may arrange as per customer requirement. Type A & Type B;
5. Installation Type A: The system will perform automatically. Kindly find the below diagram for ready reference.
6. Installation Type B: In this case customer should take care for fill up the tank daily or as per their use. Kindly find the below diagram for ready reference.
7. While installing tubes, fill it with water completely.(Note that solar storage tank should be fill with water at early morning or late evening only) Prepare soap or detergent solution in a tub.

Apply the soap solution on outer surface of the open end of tube. Insert the outer rubber seal on the tube. Let it be at the distance of more than 100 mm from the tube mouth. Penetrate the tube in tube cavity given in the tank by revolving action. Let it be inserted up to about 100 mm. Fit the end caps to the bottom end cap holder. Pull down the vacuum tube with same revolving action to make it properly seated in the end cap. Assemble all the tube in the same manner.

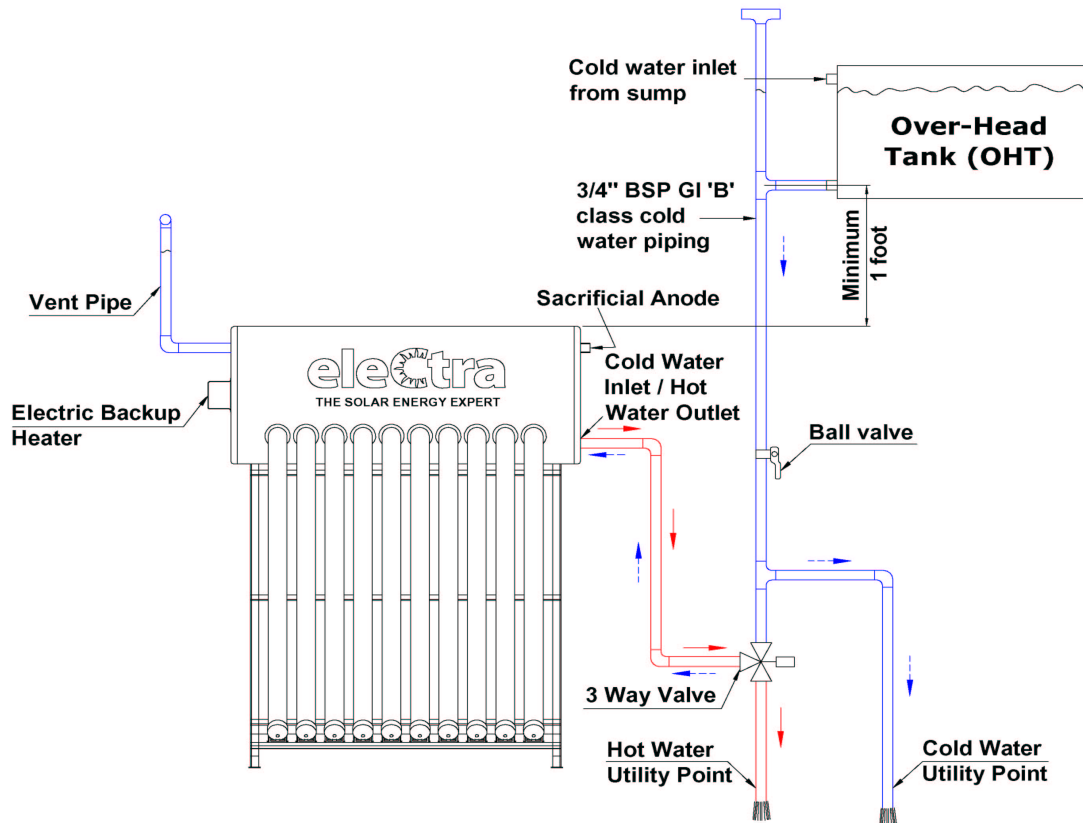
8. GI “B” class BSP threaded pipes & fittings are recommended for solar water heater.
9. Completely insulate hot water piping including vent pipe with nitrile foam/ rockwool and clad it with aluminum sheet of suitable thickness.

# Evacuated Tube Collector



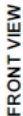
**Type A Piping Diagram**





**Type B Piping Diagram**

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**HOT WATER PIPING**  
**COLD WATER PIPING**

**SIDE VIEW**

## Commissioning

1. Open the ball valve provided on cold water and pipeline. Allow the water to fill the system completely. When the water starts flowing down at the usage point, close the tap. This will ensure that the system is completely filled with water.
2. Visually check for any leakage in the pipeline. If any leakage is noticed, tighten the respective joints till the leakage stops. Insulate the hot water pipeline and the vent pipe using 18–25 mm thick nitrile foam.
3. Provide support and clamps for hot & cold water pipeline depending on the length of the pipeline.
4. Do not disturb the system during monitoring.
5. Do not cover the collector surface.
6. Do not use the hot water during monitoring.
7. At the end of the day check the hot water temperature.

Note: Total height of the air vent pipe should not be more than 10 feet.

In case the OHT height is more than 10 feet above the eleCtra location, prefer to install a separate OHT dedicated to eleCtra at appropriate height.

Makeup tank 5 Ltr. capacities with float valve are available with us for such case. If require then contact to our authorized person.

## **Owner Maintenance**

### **Cleaning and important instructions**

1. Cleaning from dust, dirt, leaves, bird droppings should be done to ensure consistent performance of eleCtra.
2. Glass tubes may be washed with a soft cloth and warm water, soap solution or glass cleaning solution.

**Caution:** Take extreme care while cleaning the glass tubes as they are fragile

3. Tank and structural parts can be cleaned with water or soap solution as required.
4. Leaves may accumulate above or below the tubes. Please remove these leaves regularly to ensure optimal performance.
5. **FOR COLD CLIMATES:** As the outside temperature drops to sub-zero, water can freeze. When water freezes it expands, causing a pressure build up that is capable of bursting tubes. Drain the collector(s) and piping manually by opening the valves given at suitable places, when there's a chance the temperature might drop below the liquid's freezing point.

### **Broken tube replacement**

If a tube is broken it should be replaced as soon as possible by authorized technician. Any broken glass should be cleared away to prevent injury.

To remove and replace a tube:

1. Pull the existing tube out from the tank and remove any glass pieces from the glass collector.
2. When removing the tube, the silicon rubber seal in the tank may tear or come out. If so, replace this seal prior to inserting the new tube.

3. Take out the new tube from box/container
4. Insert the protective end cap on the base of the evacuated tube and check for shiny silver color at the bottom of the tube which ensures presence of proper vacuum. Do not use the tube if bottom of the tube is white or transparent instead of silver which denotes leakage of vacuum majority due to breakage of the tube.
5. While installing tubes, fill it with water completely. Prepare soap or detergent solution in a tub. Apply the soap solution on outer surface of the open end of tube.
6. Insert the outer rubber seal on the tube. Let it be at the distance of more than 100 mm from the tube mouth. Penetrate the tube in tube cavity given in the tank by revolving action. Let it be inserted up to about 100 mm.
7. Fit the end caps to the bottom end cap holder. Pull down the vacuum tube with same revolving action to make it properly seated in the end cap.
8. Clean the replaced tube thoroughly.

### **Insulation**

The pipeline from the eleCtra outlet to utility point should be well insulated. Air vent pipe should also be well insulated. This insulation should be checked periodically for damage. Up to 60% heat loss can occur if the insulation is not done or of poor quality.

### **Other components**

Other parts of the system such as tank, electric backup heater, sacrificial anode, structure and piping should be serviced / inspected by qualified technicians.

## Precautions & Safety

1. Location of the eleCtra water heating system should be out of the reach of children.
2. Take enough care of the system from striking hard objects and animals.
3. The **TDS of water** should not exceed **600 ppm. Hardness <50 ppm should be also considered for FPC installation.**
4. Do not touch or fill up cold water inside the glass tube if the tube has been exposed to sun without water. If the eleCtra tank has been fully empty, filling of water should be done in early morning. This should be especially taken care when you are out of home for more than 3-4 days. It is recommended that after reaching back to home you should perform the check of water presence in heater tank.
5. It is highly recommended that a sheet of opaque fabric or equivalent to be put on for proper covering of tube collectors when the system is not in use for more than 3 days.
6. The back-up electrical heater should be installed by a trained electrician through ELCB switch who will provide a proper earth connection (If you don't have firm earthing at your home, please make it before installing of eleCtra) and protect the cable connections from water and moisture.
7. It is recommended to switch OFF the electrical heater before taking water out from utility point or rather touching the tap.
8. Clogging or damage to the vent pipe can create severe damage to eleCtra. Call nearest authorized personnel immediately if this happens.
9. In case of emergency or finding any unusual symptoms, like breakage of tubes or leakage in tank, close the inlet valve immediately and call dealer's authorized service provider for problem solving.
10. Hot water coming from eleCtra can cause severe burns. Test the water before use. Small children, disabled, or elderly persons should use hot water only under adult supervision. Electrotherm Solar Limited is not responsible for any damages, injuries or casualties caused directly or indirectly by usage of or due to eleCtra solar systems.

## Troubleshooting

Please contact our Authorized Service provider in case problem persists after following this guide.

Sr. No	Problem	Possible Causes	Solution
1	Water is not coming out from utility point	<ol style="list-style-type: none"> <li>1. Cold water inlet valve is off</li> <li>2. Cold water inlet pipe or hot water outlet pipe is choked</li> <li>3. No cold water supply to solar water heater from overhead tank</li> <li>4. Float valve in the makeup tank has jammed or choked. (If equipped)</li> <li>5. Air is trapped in the cold or hot water pipe line</li> </ol>	<p>Open the valve</p> <p>Clean the pipes &amp; descale sediments</p> <p>Fill the overhead cold water tank. If the eleCtra tank is completely empty, fill the overhead tank in early morning time when tubes are not exposed to sunlight or hot inside and reduce the chances of breakage of tubes</p> <p>Clean or replace the float-valve</p> <p>Open the hot water outlet pipe near the valve and remove the air or drain the water out of the tank and fill it again</p>

2	Water is not hot	<ol style="list-style-type: none"> <li>1. eleCtra is not exposed to enough sunlight</li> <li>2. Excess water consumption then system rating</li> <li>3. Cloudy day without sun light</li> <li>4. Glass tubes not cleaned</li> <li>5. At the utility point, cold water is of very high pressure and doesn't let the hot water coming out from mixing valve / tap</li> <li>6. Reverse flow of cold water to the eleCtra tank in case of mixing valve</li> <li>7. Hot water pipeline not insulated properly</li> </ol>	<p>Relocate the system to get maximum sunlight</p> <p>Plan your water usage as per installed capacity. In case of high consumption use the electric back-up heater</p> <p>Use the electrical back-up heater</p> <p>Clean the tubes thoroughly as mentioned in cleaning section of owner maintenance</p> <p>Run hot water slowly at first and then gradually open up the cold water tap for optimal mixing of hot and cold water at the point of use or take out both of them one after another</p> <p>Close cold &amp; hot water tap of the mixing valve after use</p> <p>Insulate the pipeline</p>
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3	Intermittent hot water flow	<p>1. Air vents of overhead tank and eleCtra tank is not provided or blocked</p> <p>2. Air lock</p> <p>3. Cold water inlet pipe inside tank is choked</p>	<p>Provide suitable air vent for both the tanks, clean the vent pipe and put it back properly</p> <p>Remove hot water outlet pipe from valve to clear air or drain and refill water from the solar water heater</p> <p>Make the pipe cleaned by authorized technician</p>
4	Overnight temperature drop is very high	<p>1. Ineffective insulation</p> <p>2. The insulation is wet</p> <p>3. Excess heat loss in hot water pipeline</p> <p>4. Hot water is raised up in overhead tank slowly</p>	<p>Check the insulation around the storage tank</p> <p>Ensure that the insulation is dry. Get the repair done if leakage observed in any of the tanks of eleCtra by authorized service person</p> <p>Check if hot water pipeline is installed as per the installation guidelines and proper insulation is done</p> <p>Check the cold water piping as per the diagram and make it proper if not so</p>

5	Water is boiling and steam is being released from vent	1. System not in use for a long time  2. Failure of thermostat (if equipped)	If the system is not in use for a long time, cover it with an opaque cloth or sheet  Change the thermostat.
6	Electrical backup not working	1. Improper wiring connections  2. Inappropriate setting of thermostat temperature (if equipped)  3. Damage by lightning strike  4. Short circuit	Make proper wiring done with qualified electrician  Set the thermostat for a comfortable bath between 35 – 45 °C  Inspect / replace fuse, heater element and thermostat  Replace with a new one.
7	Leakage from any of the component of eleCtra	1. Rubber seal damage, manipulation of tube insertion inside the cavity, leakage from the tank or piping	Try to determine the source of the leakage. Get it fixed by authorized service provider

8	Water over flows from air vent	<ol style="list-style-type: none"> <li>1. Cold water comes from utility point to eleCtra tank by reverse flow while using mixing valve</li> <li>2. Inadequate air vent length</li> <li>3. Float Valve stuck in the makeup / overhead tank (if equipped)</li> </ol>	<p>Close cold &amp; hot water tap of the mixing valve</p> <p>Increase the length of the air vent as per installation guide lines.</p> <p>Clean or replace the float valve</p>
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## Standard Parts Identification List

ETC STORAGE TANK 	FPC STORAGE TANK 
ETC GLASS TUBE 	FLAT PLATE COLLECTOR 
SILICON SEAL 	THREADED FLANGE WITH GASKET 
EPDM SEAL 	BLIND FLANGE WITH GASKET 
END CAP 	TEMPERATURE GAUGE 
ELECTRIC HEATER 	PRESSURE GAUGE 
THERMOSTAT SENSOR 	BRASS UNION 
SACRIFICIAL ANODE 	NON RETURN VALVE 
BALL VALVE 	FERRULE 
AIR RELEASE VALVE 	CIRCULATION PUMP 
PRESSURE RELEASE VALVE 	PRESSURE PUMP 
STRAINER 	SMART CONTROLLER 
SOLENOID VALVE 	MAKE UP TANK 
FLOAT VALVE 	FERRULE 

## Warranty Clause

### Warranty Qualification

To qualify for this warranty:

1. The eleCtra SWH must be delivered by ESL authorized dealer /distributor and serviced by ESL authorized dealer / distributor / service station.
2. After successful installation of product immediately register your product with the company through SMS to avail warranty on product and post sales services.

**SMS “eleCtra” <space> Sr.Number (Mentioned on Tank) to 56767**

3. The warranty registration in respect of each SWH must be completed in Installation report duly filled up and signed by owner and dealer / distributor with the stamped at the time of delivery of the SWH. Warranty card given inside back cover of this booklet must be duly filled and authorized.
4. All service has to be carried out by eleCtra authorized dealer / distributor / service agency at regular intervals.

### Warranty Term

**Without CPP (Corrosion Proof Process) system:**

- The **Thermal Performance** of our product / goods will be covered under **warranty up to the 60 months after commissioning.**
- Our **product / goods** will be covered under **warranty up to the 24 months after commissioning or 30 months after dispatch from manufacturing plant whichever is earlier.**
- Installation report is a must to avail warranty benefits

**With CPP (Corrosion Proof Process) system:**

- The **Thermal Performance** of our product / goods will be covered under **warranty up to the 60 months after commissioning.**
- Our **product / goods** will be covered under **warranty up to the 60 months after commissioning or 66 months after dispatch from manufacturing plant whichever is earlier.**
- Installation report is a must to avail warranty benefits

## Warranty Obligation on ESL

If any part(s) is/are found to be defective due to manufacturing error in an eleCtra SWH within the stipulated term stated above, obligation on ESL is only to repair or replace at its sole discretion. For defective parts, replacement will be free, when ESL acknowledges that such a defect is attributable to faulty material or workmanship at the time of manufacture. All the repairs or replacements that are not covered in warranty shall be on chargeable basis.

## Limitation

This warranty shall not apply to:

1. Collector glass tubes
2. Plumbing and associated parts.
3. Installation or any damages resulted due to faulty installation and operation.
4. Any SWH which has not been used in accordance with the operating instructions in the eleCtra Operation & Maintenance Manual.
5. Any repairs or replacement required as a result of accidents or collision.
6. Any defects caused by misuse, negligence, abnormal use or insufficient care.
7. Any damage that is caused by harsh or adverse water conditions, contamination or corrosion from particles in the water supply, excessive water pressure, over temperature or neglect of any kind to the hot water unit and solar collector or their components.
8. Where the water used with eleCtra SWH system exceeds following water quality criteria
  - a. TDS up to **600 ppm**
  - b. Chloride content up to **100 ppm**
  - c. Flouride content up to **1 ppm**
  - d. **Hardness up to 50 ppm for FPC**
9. Where the corrosion or any damage has occurred when the Sacrificial Anode has not been changed in accordance with the owner's manual.

10. Where presence of static electricity or any kind of electrical current is found in contact with any part of the eleCtra system.
11. Any SWH on which parts and accessories not approved by ESL have been used.
12. Any SWH which has been assembled, installed, disassembled, adjusted or repaired by other than ESL authorized dealer / distributor / service station.
13. Any SWH which has been used for heating any material/liquid other than water complying water quality standards mentioned in para 8 above.
14. Any damage or deterioration, caused by fire, floods, earthquakes, chemical pollution, industrial pollution, bird dropping or any other natural calamities.

### **Owner's Warranty Responsibilities**

It is responsibility of each owner to:

1. Make certain that the warranty registration was completed at the time of the delivery of the SWH.
2. Follow the instructions related to safety and owner's maintenance specified in the eleCtra Operation & Maintenance Manual. Take adequate care of eleCtra without inflicting any intentional damages.
3. Maintain all bills of sale, receipts, service coupons and warranty card, Installation report for proof of installation, service, etc. which are essential to claim warranty. Owner has to ensure that all the free services till date are carried out and coupons are duly signed by authorized service agency / dealer / distributor in owner's copy. Service coupons are given at the last part of this booklet.
4. Any claim under the warranty must include full details of the defect and /or damage to the eleCtra and its components with the product defect report and photographs. All claims must be made within fifteen days of the detection of the defect. Any such defect should be immediately conveyed to the authorized service centre.

## Frequently Asked Questions

### **FAQ #1: Why an eleCtra Solar Water Heater?**

High Thermal performance and decent cost savings in terms of electricity and other energy sources makes eleCtra Solar Water Heater best alternative to your Electric geysers and other Competitors.

### **FAQ #2: What about rainy days or overcast days?**

Our high graded Evacuated Tube Collectors absorbs diffused radiations so we can get hot water in overcast weather as well. In case of low radiation our system is equipped with standard electric backup element which will fulfill hot water needs in overcast conditions.

### **FAQ #3: Life and Durability of Tank and Structure?**

Our tank has special Anti corrosion coating which make sure tank life up to 5 years and Galvanized Iron coating structure gives high endless life to structures.

### **FAQ #4: How long does it take to install system?**

Our skilled installation team can install a eleCtra solar water heater in less than a day.

### **FAQ #5: What about service availability?**

eleCtra has over 120 dealers across the country. These dealers have been trained to install and service eleCtra units. In case of emergencies, eleCtra has help line number and a full range of spares in stock.

### **FAQ #6: Will I have hot water in the morning?**

Absolutely Yes! eleCtra has a thick PUF insulation which ensures very less heat loss during nights. This means that hot water will stay hot throughout the nights.

### **FAQ #7: How long does the system take to heat a full tank?**

In abundant solar radiation our system will heat a 100-litre tank in 6-7 hours. While using electric backup heater it takes 2-3hours.

### **FAQ #8: What should be the duration in consecutive services& list of services?**

We recommend arranging system service quarterly.



**Checklist**

- Check for Sacrificial anode
- Clean the system
- Check for leakage only in system
- Check the collector
- Check vent pipe condition

## Warranty Card

Name of Purchaser: .....

Model:.....

Capacity: .....

Serial No: .....

Address: .....

Date of Purchase: .....

Installer's Name: .....

Installer's ID: .....

Signature of Installer: .....

Dealers / Distributor's Stamp and Signature with date

Manufacturer's Stamp and Signature with date



**Electrotherm Solar Ltd.**

Manufactured By:

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